## REMARKS/ARGUMENTS

This paper is being provided in response to the September 17, 2004 Office Action for the above-referenced application. In this response, Applicant has canceled Claims 6-31, added new Claims 32-46, and amended Claim 1 in order to clarify that which Applicant deems to be the claimed invention. Applicant respectfully submits that the newly added claims and the amendments to the claims are all supported by the originally filed application.

Applicant thanks the Examiners for the courtesies extended in the interview of January 27, 2005 with Dr. Schabes and Applicant's attorneys, Dr. Pasternack and Ms. Saturnelli. In this amendment and response, Applicant has amended independent Claim 1 and added new independent Claims 35, 37, and 45 in accordance with discussions from the interview. Additionally, Applicant has canceled other pending claims in order to expedite examination of the remaining claims and newly added claims.

In response to the comments on the specification, Applicant has amended the specification headings to remove boldface and underlining as well as remove and add other section headings in accordance with guidelines set forth in the Office Action.

The rejection of Claims 1, 3-11, 14 and 29-31 under 35 U.S.C. § 102(b) as being anticipated by Brown et al. (U.S. Patent No. 6,665,666, hereinafter referred to as "Brown") is hereby traversed and reconsideration thereof is respectfully requested.

Applicant respectfully submits that this rejection as applied to Claims 6-11, 14 and 19-31 is moot in view of the cancellation these claims herein. Applicant respectfully submits that Claims 1, and 3-5 as amended herein, are patentable over the cited reference.

Applicant's Claim 1, as amended herein, recites a method of answering a question comprising the steps of receiving a question; parsing the question to obtain an analyzed question; matching the analyzed question to a set of predetermined question patterns to obtain one or more matched question patterns; transforming the one or more matched question patterns into one or more partially unspecified statements, said transforming including matching each of the matched question patterns to a set of predetermined transformations corresponding to said one or more partially unspecified statements, wherein each of the partially unspecified statements is missing a portion corresponding to an answer and said predetermined transformations describe syntactic variations of one or more terms included in the question; generating partially unspecified queries corresponding to the partially unspecified statements; and obtaining answers by matching the partially unspecified queries to stored information. Claims 3-5 depend from Claim 1.

Brown relates to the field of querying and searching collections of text. Defined in Brown is a set of labels called QA-tokens which function as abstractions of phrases or question types. Also disclosed in Brown is a pattern file, which consists of a number of pattern records, each of which has a question template, an associated question word pattern, and an associated set of QA-tokens. A query analysis process matches a query to one or more question templates. A priority algorithm is used if there is more than one match. A query analysis process then replaces the associated question word pattern in the matching query with the associated set of QA tokens.

A pattern matching process then identifies patterns of text in the document collections and augments the location with corresponding QA tokens. A search process then matches the processed query against a window of user-selected number of sentences. A hit list of top scoring windows is returned to the user. (See Abstract; Figure 3 Patterns File).

Applicant's Claim 1, as amended herein, is neither disclosed nor suggested by Brown in that Brown neither discloses nor suggests at least the feature of *a method of answering a question comprising the steps of ... transforming the one or more matched question patterns into one or more partially unspecified statements, said transforming including matching each of the matched question patterns to a set of predetermined transformations corresponding to said one or more partially unspecified statements, wherein each of the partially unspecified statements is missing a portion corresponding to an answer and said predetermined transformations describe syntactic variations of one or more terms included in the question; ...* as set forth in amended Claim 1. Brown discloses using a pattern file as illustrated in Brown's Figure 3 in which a query is matched to one or more question templates. However, Brown neither discloses nor suggests predetermined transformations describing syntactic variations of terms from a question, and neither discloses nor suggests matching a matched question pattern to any predetermined transformation.

Applicant's claimed predetermined transformations are described, for example, in Applicant's originally filed specification at page 13, lines 1-7, where a question pattern 130 is matched by look up into *framemap2* to obtain transformations. Also described, for example, on page 11, lines 15-21 of Applicant's originally filed specification, is that the right side of each arrow in *framemap2* are all potential affirmative statement structures which may be

configured from a given query structure. Brown neither discloses nor suggests any such transformations and appears silent regarding performing any step related to matching a matched question pattern. Brown discloses matching a query to one or more question templates, but neither discloses or suggests performing any further matching step using a matched question template.

Accordingly, Brown neither discloses nor suggests at least the feature of *transforming the one or more matched question patterns into one or more partially unspecified statements, said transforming including matching each of the matched question patterns to a set of predetermined transformations corresponding to said one or more partially unspecified statements, wherein each of the partially unspecified statements is missing a portion corresponding to an answer and said predetermined transformations describe syntactic variations of one or more terms included in the question;* ... as set forth in amended Claim 1.

In view of the foregoing, Applicant respectfully submits that Claims 1, and 3-5 that depend therefrom, are patentable over the cited art of Brown. Applicant respectfully requests that the rejection be reconsidered and withdrawn.

The rejection of Claims 2, 12-15 and 25-28 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kupiec (U.S. Patent No. 5,519,608, hereinafter referred to as "Kupiec") is hereby traversed and reconsideration thereof is respectfully requested.

Applicant respectfully submits that this rejection as applied to Claims 12-15 and 25-28 is moot in view of the cancellation of these claims herein.

Claim 2 depends from independent Claim 1. For reasons set forth above, Applicant's Claim 1 is neither disclosed nor suggested by Brown. For reasons set forth below, Applicant respectfully submits that combining Brown with Kupiec also neither discloses nor suggest Claim 1, or claims that depend therefrom.

Claim 1 is summarized above.

The reference of Brown is summarized above.

The Office Action states that Brown does not teach transforming matched question patterns into one or more partially unspecified statements using syntactic frames. The Office Action further states that Kupiec teaches transforming matched question patterns into one or more partially unspecified statements using syntactic frames. Kupiec discloses, in his Figure 2, a method including question processing 220, preliminary hypothesis generation 240 and hypothesis verification 260. Hypothesis verification uses lexicosyntactic analysis to verify linguistic relations for the selected hypothesis produced by step 240. (Col. 14, Lines 38-43; Figure 3).

Applicant's Claim 1, as amended herein, is neither disclosed nor suggested by the references, taken separately or in combination, in that the references neither disclose nor suggest at least the feature of *a method of answering a question comprising the steps of ...*

*transforming the one or more matched question patterns into one or more partially unspecified statements, said transforming including matching each of the matched question patterns to a set of predetermined transformations corresponding to said one or more partially unspecified statements, wherein each of the partially unspecified statements is missing a portion corresponding to an answer and said predetermined transformations describe syntactic variations of one or more terms included in the question; ...* as set forth in amended Claim 1. For reasons set forth above, Brown neither discloses nor suggests at least the feature of *transforming the one or more matched question patterns into one or more partially unspecified statements, said transforming including matching each of the matched question patterns to a set of predetermined transformations corresponding to said one or more partially unspecified statements, wherein each of the partially unspecified statements is missing a portion corresponding to an answer and said predetermined transformations describe syntactic variations of one or more terms included in the question; ...* as set forth in amended Claim 1. Kupiec discloses using lexicosyntactic analysis as part of hypothesis verification after the hypothesis has been selected and appears silent with regard to any disclosure or suggestion of using the lexicosyntatic analysis as part of hypothesis selection. Further, Kupiec appears silent with regard to any disclosure or suggestion of Applicant's predetermined transformations and use in the foregoing feature of amended Claim 1. Thus, combining Kupiec with Brown does not overcome the deficiencies of Brown with respect to Applicant's Claim 1 and the references neither disclose nor suggest at least the feature of amended Claim 1 as pointed out above.
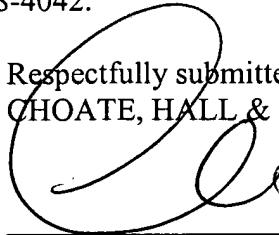
In view of the foregoing, Applicant respectfully submits that amended Claim 1, and claims that depend therefrom, are patentable over Brown and Kupiec. Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Applicant respectfully submits that the rejection of Claims 16-24 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kupiec, as applied to claims 2-15 and 25-28 above, and further in view of de Hita et al. (U.S. Patent No. 6,081,774, hereinafter referred to as "de Hita") is moot in view of the cancellation of Claims 16-24 herein.

Applicant respectfully submits that newly added Claims 32-46 are patentable over the cited art. Claims 32-34 depend from Claim 1 and are patentable over the cited art for at least the same reasons as Claim 1 as set forth above. Newly added independent Claims 35, 37, and 45 are also patentable over the cited art for reasons similar to those set forth regarding Claim 1. Remaining Claims 36, 38-44, and 46 depend from independent Claims 35, 37, and 45, respectively, and are deemed patentable over the cited art for at least the same reasons as independent Claims 35, 37, and 45.

Based on the above, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 617-248-4042.

Respectfully submitted,
CHOATE, HALL & STEWART LLP

Anne E. Saturnelli
Registration No. 41,290

Patent Group
CHOATE, HALL & STEWART LLP
Exchange Place
53 State Street
Boston, MA 02109-2804
Tel: (617) 248-5000
Fax: (617) 248-4000

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